

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 08/466,38/C  
Source: 1FW/6  
Date Processed by STIC: 11/8/04

# ***ENTERED***



IFW16

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/08/466,381C

DATE: 11/08/2004  
 TIME: 16:21:47

Input Set : A:\41426-C.txt  
 Output Set: N:\CRF4\11082004\H466381C.raw

3 <110> APPLICANT: Israeli, Ron S.  
 4 Heston, Warren D.W.  
 5 Fair, William R.  
 7 <120> TITLE OF INVENTION: PROSTATE-SPECIFIC MEMBRANE ANTIGEN  
 9 <130> FILE REFERENCE: 1769/41426-C/JPW/CY  
 11 <140> CURRENT APPLICATION NUMBER: US 08/466,381C  
 12 <141> CURRENT FILING DATE: 1995-06-06  
 14 <150> PRIOR APPLICATION NUMBER: US 08/403,803  
 15 <151> PRIOR FILING DATE: 1995-03-17  
 17 <150> PRIOR APPLICATION NUMBER: PCT/US93/10624  
 18 <151> PRIOR FILING DATE: 1993-11-05  
 20 <150> PRIOR APPLICATION NUMBER: US 07/973,337  
 21 <151> PRIOR FILING DATE: 1992-11-05  
 23 <160> NUMBER OF SEQ ID NOS: 38  
 25 <170> SOFTWARE: PatentIn version 3.1  
 27 <210> SEQ ID NO: 1  
 28 <211> LENGTH: 2653  
 29 <212> TYPE: DNA  
 30 <213> ORGANISM: Human  
 32 <400> SEQUENCE: 1

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| 33 | ctcaaaagg   | g          | ccg         | gatttc      | cttctc      | ctc        | g | aggcagatgt | tgcctctctc | tctc | gctcgg | 60   |
| 35 | attgggttcag | tgcactctag | aaacactgct  | gtgggtggaga | aactggaccc  | caggtctgga |   |            |            |      |        | 120  |
| 37 | gcgaattcca  | gcctgcagg  | ctgataagcg  | aggcattagt  | gagattgaga  | gagactttac |   |            |            |      |        | 180  |
| 39 | cccgccgttg  | tggttgagg  | gcgcgcagta  | gagcagcagc  | acaggcgcgg  | gtcccgggag |   |            |            |      |        | 240  |
| 41 | cccggtctcg  | ctcgcgcga  | gatgtggaat  | ctccttcacg  | aaacegactc  | ggctgtggcc |   |            |            |      |        | 300  |
| 43 | accgcgcgcc  | gcccgcgctg | gctgtgcgct  | ggggcgctgg  | tgctggcggg  | tggtttcttt |   |            |            |      |        | 360  |
| 45 | ctcctcggtc  | tcctcttcgg | gtgggtttata | aaatcctcca  | atgaagctac  | taacattact |   |            |            |      |        | 420  |
| 47 | ccaaagcata  | atatgaaagc | atTTTTggat  | gaattgaaag  | ctgagaacat  | caagaagttc |   |            |            |      |        | 480  |
| 49 | ttatataatt  | ttacacagat | accacattta  | gcaggaacag  | aacaaaactt  | tcagcttgca |   |            |            |      |        | 540  |
| 51 | aagcaaatc   | aatcccagtg | gaaagaattt  | ggcctggatt  | ctgttgagct  | agcacattat |   |            |            |      |        | 600  |
| 53 | gatgtcctgt  | tgctctaccc | aaataagact  | catcccaact  | acatctcaat  | aattaatgaa |   |            |            |      |        | 660  |
| 55 | gatggaaatg  | agattttcaa | cacatcatta  | tttgaaccac  | ctcctccagg  | atatgaaaat |   |            |            |      |        | 720  |
| 57 | gtttcgata   | ttgtaccacc | tttcagtgtc  | ttctctcctc  | aagggaatgcc | agagggcgat |   |            |            |      |        | 780  |
| 59 | ctagtgtatg  | ttactatgc  | acgaactgaa  | gacttcttta  | aattggaacg  | ggacatgaaa |   |            |            |      |        | 840  |
| 61 | atcaattgct  | ctgggaaaat | tgtaattgcc  | agatatggga  | aagttttcag  | aggaaataag |   |            |            |      |        | 900  |
| 63 | gttaaaaaatg | cccagctggc | aggggccaaa  | ggagtcattc  | tctactccga  | ccctgctgac |   |            |            |      |        | 960  |
| 65 | tactttgtctc | ctggggtgaa | gtcctatcca  | gatgggttga  | atcttctcgg  | aggtggtgtc |   |            |            |      |        | 1020 |
| 67 | cagcgtggaa  | atatectaaa | tctgaatggt  | gcaggagacc  | ctctcacacc  | aggttaccga |   |            |            |      |        | 1080 |
| 69 | gcaaatgaat  | atgcttatag | gcgtggaatt  | gcagaggctg  | ttggtcttcc  | aagtattcct |   |            |            |      |        | 1140 |
| 71 | gttcatccaa  | ttggatacta | tgatgcacag  | aagctcctag  | aaaaaatggg  | tggtcagca  |   |            |            |      |        | 1200 |
| 73 | ccaccagata  | gcagctggag | aggaagcttc  | aaagtgcctc  | acaatgttgg  | acctggcttt |   |            |            |      |        | 1260 |
| 75 | actggaaact  | tttctacaca | aaaagtcaag  | atgcacatcc  | actctaccaa  | tgaagtgaca |   |            |            |      |        | 1320 |
| 77 | agaattttaca | atgtgatagg | tactctcaga  | ggagcagtg   | aaccagacag  | atatgtcatt |   |            |            |      |        | 1380 |

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Input Set : A:\41426-C.txt

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79 ctggggaggtc accggggactc atggggtgttt ggtgggtattg accctcagag tggagcagct 1440
81 gttgttcatg aaattgtgag gagcttttga acactgaaaa aggaaggggtg gagacctaga 1500
83 agaacaattt tgtttgcaag ctgggatgca gaagaatttg gtcttcttgg ttctactgag 1560
85 tgggcagagg agaattcaag actccttcaa gagcgtggcg tggcttatat taatgctgac 1620
87 tcactatag aaggaaacta cactctgaga gttgattgta caccgctgat gtacagcttg 1680
89 gtacacaacc taacaaaaga gctgaaaagc cctgatgaag gctttgaagg caaatctctt 1740
91 tatgaaagt ggactaaaaa aagtccttcc ccagagttca gtggcatgcc caggataagc 1800
93 aaattgggat ctggaaatga ttttgagggtg ttcttccaac gacttggaaat tgcttcaggc 1860
95 agagcacggt atactaaaaa ttgggaaaca aacaaattca gcggctatcc actgtatcac 1920
97 agtgtctatg aaacatatga gttgggtggaa aagttttatg atccaatgtt taaatatcac 1980
99 ctactgtgg cccagggttcg aggagggatg gtgtttgagc tagccaattc catagtgtctc 2040
101 ctttttgatt gtgcagatta tgctgtagtt ttaagaaagt atgctgacaa aatctacagt 2100
103 atttctatga aacatccaca ggaaatgaag acatacagtg tatcatttga ttcacttttt 2160
105 tctgcagtaa agaattttac agaaattgct tccaagttca gtgagagact ccaggacttt 2220
107 gacaaaagca acccaatagt attaagaatg atgaatgatc aactcatgtt tctggaaaga 2280
109 gcatttattg atccattagg gttaccagac aggccttttt ataggcatgt catctatgct 2340
111 ccaagcagcc acaacaagta tgcaggggag tcattcccag gaatttatga tgctctgttt 2400
113 gatattgaaa gcaaagtgga cccttccaag gcctggggag aagtgaagag acagatttat 2460
115 gttgcagcct tcacagtgca ggcagctgca gagactttga gtgaagtagc ctaagaggat 2520
117 tctttagaga atccgtattg aatttgtgtg gtatgtcact cagaaagaat cgtaatgggt 2580
119 atattgataa attttaaaat tggatatattt gaaataaagt tgaatattat atataaaaaa 2640
121 aaaaaaaaaa aaa 2653
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125 <211> LENGTH: 750
126 <212> TYPE: PRT
127 <213> ORGANISM: Human
129 <400> SEQUENCE: 2
131 Met Trp Asn Leu Leu His Glu Thr Asp Ser Ala Val Ala Thr Ala Arg
132 1 5 10 15
135 Arg Pro Arg Trp Leu Cys Ala Gly Ala Leu Val Leu Ala Gly Gly Phe
136 20 25 30
139 Phe Leu Leu Gly Phe Leu Phe Gly Trp Phe Ile Lys Ser Ser Asn Glu
140 35 40 45
143 Ala Thr Asn Ile Thr Pro Lys His Asn Met Lys Ala Phe Leu Asp Glu
144 50 55 60
147 Leu Lys Ala Glu Asn Ile Lys Lys Phe Leu Tyr Asn Phe Thr Gln Ile
148 65 70 75 80
151 Pro His Leu Ala Gly Thr Glu Gln Asn Phe Gln Leu Ala Lys Gln Ile
152 85 90 95
155 Gln Ser Gln Trp Lys Glu Phe Gly Leu Asp Ser Val Glu Leu Ala His
156 100 105 110
159 Tyr Asp Val Leu Leu Ser Tyr Pro Asn Lys Thr His Pro Asn Tyr Ile
160 115 120 125 0
163 Ser Ile Ile Asn Glu Asp Gly Asn Glu Ile Phe Asn Thr Ser Leu Phe
164 130 135 140
167 Glu Pro Pro Pro Pro Gly Tyr Glu Asn Val Ser Asp Ile Val Pro Pro
168 145 150 155 160
171 Phe Ser Ala Phe Ser Pro Gln Gly Met Pro Glu Gly Asp Leu Val Tyr
172 165 170 175

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175 Val Asn Tyr Ala Arg Thr Glu Asp Phe Phe Lys Leu Glu Arg Asp Met
176      180      185      190
179 Lys Ile Asn Cys Ser Gly Lys Ile Val Ile Ala Arg Tyr Gly Lys Val
180      195      200      205
183 Phe Arg Gly Asn Lys Val Lys Asn Ala Gln Leu Ala Gly Ala Lys Gly
184      210      215      220
187 Val Ile Leu Tyr Ser Asp Pro Ala Asp Tyr Phe Ala Pro Gly Val Lys
188 225      230      235      240
191 Ser Tyr Pro Asp Gly Trp Asn Leu Pro Gly Gly Gly Val Gln Arg Gly
192      245      250      255
195 Asn Ile Leu Asn Leu Asn Gly Ala Gly Asp Pro Leu Thr Pro Gly Tyr
196      260      265      270
199 Pro Ala Asn Glu Tyr Ala Tyr Arg Arg Gly Ile Ala Glu Ala Val Gly
200      275      280      285
203 Leu Pro Ser Ile Pro Val His Pro Ile Gly Tyr Tyr Asp Ala Gln Lys
204      290      295      300
207 Leu Leu Glu Lys Met Gly Gly Ser Ala Pro Pro Asp Ser Ser Trp Arg
208 305      310      315      320
211 Gly Ser Leu Lys Val Pro Tyr Asn Val Gly Pro Gly Phe Thr Gly Asn
212      325      330      335
215 Phe Ser Thr Gln Lys Val Lys Met His Ile His Ser Thr Asn Glu Val
216      340      345      350
219 Thr Arg Ile Tyr Asn Val Ile Gly Thr Leu Arg Gly Ala Val Glu Pro
220      355      360      365
223 Asp Arg Tyr Val Ile Leu Gly Gly His Arg Asp Ser Trp Val Phe Gly
224      370      375      380
227 Gly Ile Asp Pro Gln Ser Gly Ala Ala Val Val His Glu Ile Val Arg
228 385      390      395      400
231 Ser Phe Gly Thr Leu Lys Lys Glu Gly Trp Arg Pro Arg Arg Thr Ile
232      405      410      415
235 Leu Phe Ala Ser Trp Asp Ala Glu Glu Phe Gly Leu Leu Gly Ser Thr
236      420      425      430
239 Glu Trp Ala Glu Glu Asn Ser Arg Leu Leu Gln Glu Arg Gly Val Ala
240      435      440      445
243 Tyr Ile Asn Ala Asp Ser Ser Ile Glu Gly Asn Tyr Thr Leu Arg Val
244      450      455      460
247 Asp Cys Thr Pro Leu Met Tyr Ser Leu Val His Asn Leu Thr Lys Glu
248 465      470      475      480
251 Leu Lys Ser Pro Asp Glu Gly Phe Glu Gly Lys Ser Leu Tyr Glu Ser
252      485      490      495
255 Trp Thr Lys Lys Ser Pro Ser Pro Glu Phe Ser Gly Met Pro Arg Ile
256      500      505      510
259 Ser Lys Leu Gly Ser Gly Asn Asp Phe Glu Val Phe Phe Gln Arg Leu
260      515      520      525
263 Lys Ile Ala Ser Gly Arg Ala Arg Tyr Thr Lys Asn Trp Glu Thr Asn
264      530      535      540
267 Lys Phe Ser Gly Tyr Pro Leu Tyr His Ser Val Tyr Glu Thr Tyr Glu
268 545      550      555      560
271 Leu Val Glu Lys Phe Tyr Asp Pro Met Phe Lys Tyr His Leu Thr Val

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272          565          570          575
275 Ala Gln Val Arg Gly Gly Met Val Phe Glu Leu Ala Asn Ser Ile Val
276          580          585          590
279 Leu Pro Phe Asp Cys Arg Asp Tyr Ala Val Val Leu Arg Lys Tyr Ala
280          595          600          605
283 Asp Lys Ile Tyr Ser Ile Ser Met Lys His Pro Gln Glu Met Lys Thr
284          610          615          620
287 Tyr Ser Val Ser Phe Asp Ser Leu Phe Ser Ala Val Lys Asn Phe Thr
288 625          630          635          640
291 Glu Ile Ala Ser Lys Phe Ser Glu Arg Leu Gln Asp Phe Asp Lys Ser
292          645          650          655
295 Asn Pro Ile Val Leu Arg Met Met Asn Asp Gln Leu Met Phe Leu Glu
296          660          665          670
299 Arg Ala Phe Ile Asp Pro Leu Gly Leu Pro Asp Arg Pro Phe Tyr Arg
300          675          680          685
303 His Val Ile Tyr Ala Pro Ser Ser His Asn Lys Tyr Ala Gly Glu Ser
304          690          695          700
307 Phe Pro Gly Ile Tyr Asp Ala Leu Phe Asp Ile Glu Ser Lys Val Asp
308 705          710          715          720
311 Pro Ser Lys Ala Trp Gly Glu Val Lys Arg Gln Ile Tyr Val Ala Ala
312          725          730          735
315 Phe Thr Val Gln Ala Ala Ala Glu Thr Leu Ser Glu Val Ala
316          740          745          750

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319 &lt;210&gt; SEQ ID NO: 3

320 &lt;211&gt; LENGTH: 8

321 &lt;212&gt; TYPE: PRT

322 &lt;213&gt; ORGANISM: Human

324 &lt;400&gt; SEQUENCE: 3

326 Ser Leu Tyr Glu Ser Trp Thr Lys

327 1 5

330 &lt;210&gt; SEQ ID NO: 4

331 &lt;211&gt; LENGTH: 15

332 &lt;212&gt; TYPE: PRT

333 &lt;213&gt; ORGANISM: Human

335 &lt;220&gt; FEATURE:

336 &lt;221&gt; NAME/KEY: MISC\_FEATURE

337 &lt;222&gt; LOCATION: (6)..(7)

338 &lt;223&gt; OTHER INFORMATION: Xaa=unknown

341 &lt;400&gt; SEQUENCE: 4

W--&gt; 343 Ser Tyr Pro Asp Gly Xaa Xaa Leu Pro Gly Gly Gly Val Gln Arg

344 1 5 10 15

347 &lt;210&gt; SEQ ID NO: 5

348 &lt;211&gt; LENGTH: 7

349 &lt;212&gt; TYPE: PRT

350 &lt;213&gt; ORGANISM: Human

352 &lt;400&gt; SEQUENCE: 5

354 Phe Tyr Asp Pro Met Phe Lys

355 1 5

358 &lt;210&gt; SEQ ID NO: 6

## RAW SEQUENCE LISTING

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Input Set : A:\41426-C.txt

Output Set: N:\CRF4\11082004\H466381C.raw

359 &lt;211&gt; LENGTH: 9

360 &lt;212&gt; TYPE: PRT

361 &lt;213&gt; ORGANISM: Human

363 &lt;400&gt; SEQUENCE: 6

365 Ile Tyr Asn Val Ile Gly Thr Leu Lys

366 1 5

369 &lt;210&gt; SEQ ID NO: 7

370 &lt;211&gt; LENGTH: 22

371 &lt;212&gt; TYPE: PRT

372 &lt;213&gt; ORGANISM: Human

374 &lt;220&gt; FEATURE:

375 &lt;221&gt; NAME/KEY: MISC\_FEATURE

376 &lt;222&gt; LOCATION: (4)..(5)

377 &lt;223&gt; OTHER INFORMATION: Xaa=unknown

380 &lt;400&gt; SEQUENCE: 7

W--&gt; 382 Phe Leu Tyr Xaa Xaa Thr Gln Ile Pro His Leu Ala Gly Thr Glu Gln

383 1 5 10 15

386 Asn Phe Gln Leu Ala Lys

387 20

390 &lt;210&gt; SEQ ID NO: 8

391 &lt;211&gt; LENGTH: 17

392 &lt;212&gt; TYPE: PRT

393 &lt;213&gt; ORGANISM: Human

395 &lt;400&gt; SEQUENCE: 8

397 Gly Val Ile Leu Tyr Ser Asp Pro Ala Asp Tyr Phe Ala Pro Asp Val

398 1 5 10 15

401 Lys

405 &lt;210&gt; SEQ ID NO: 9

406 &lt;211&gt; LENGTH: 17

407 &lt;212&gt; TYPE: PRT

408 &lt;213&gt; ORGANISM: Human

410 &lt;400&gt; SEQUENCE: 9

412 Pro Val Ile Leu Tyr Ser Asp Pro Ala Asp Tyr Phe Ala Pro Gly Val

413 1 5 10 15

416 Lys

420 &lt;210&gt; SEQ ID NO: 10

421 &lt;211&gt; LENGTH: 15

422 &lt;212&gt; TYPE: PRT

423 &lt;213&gt; ORGANISM: Human

425 &lt;400&gt; SEQUENCE: 10

427 Ala Phe Ile Asp Pro Leu Gly Leu Pro Asp Arg Pro Phe Tyr Arg

428 1 5 10 15

431 &lt;210&gt; SEQ ID NO: 11

432 &lt;211&gt; LENGTH: 19

433 &lt;212&gt; TYPE: PRT

434 &lt;213&gt; ORGANISM: Human

436 &lt;400&gt; SEQUENCE: 11

438 Tyr Ala Gly Glu Ser Phe Pro Gly Ile Tyr Asp Ala Leu Phe Asp Ile

439 1 5 10 15

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/08/466,381C

DATE: 11/08/2004  
TIME: 16:21:48

Input Set : A:\41426-C.txt

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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:4; Xaa Pos. ~~6,7~~

Seq#:7; Xaa Pos. ~~4,5~~

Seq#:12; Xaa Pos. 14,15

Seq#:13; N Pos. 12

Seq#:14; N Pos. 6

Seq#:15; N Pos. 12

Seq#:16; N Pos. 6

Seq#:17; N Pos. 3,6

Seq#:18; N Pos. 11,15

Seq#:19; N Pos. 3

Seq#:20; N Pos. 18

Seq#:23; N Pos. 9

Seq#:24; N Pos. 12

Seq#:25; N Pos. 9

Seq#:26; N Pos. 9

Seq#:27; N Pos. 82,83,84,193,196,197,217,218,219,232,233,237,238,253,254

Seq#:27; N Pos. 255,256,263,600,601,721,722,723,724

Seq#:28; N Pos. 224,255,412,413,414,433,520,521,536,537,538,539,540,541,542

Seq#:28; N Pos. 543

Seq#:29; N Pos. 214,377

## VERIFICATION SUMMARY

DATE: 11/08/2004

PATENT APPLICATION: US/08/466,381C

TIME: 16:21:48

Input Set : A:\41426-C.txt

Output Set: N:\CRF4\11082004\H466381C.raw

L:343 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0  
L:382 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0  
L:459 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0  
L:482 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0  
L:500 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0  
L:518 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0  
L:536 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0  
L:560 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0  
L:584 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0  
L:602 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0  
L:620 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0  
L:662 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0  
L:680 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0  
L:698 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0  
L:716 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0  
L:787 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:60  
L:791 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:180  
L:793 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:240  
L:803 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:540  
L:805 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:600  
L:809 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:720  
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L:872 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:360  
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L:878 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:540  
L:907 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:180  
L:913 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:360